Amendments to the Claims

This version of the claims will replace all other previous versions and listings of the claims in this application.

1. (Currently Amended) A movable barrier operator comprising:
- a movable barrier movement sensor configured to sense movement of a barrier and effect signals which reflect movement of the barrier upstream and downstream;
- a counter that is responsive to the signals effected by the barrier movement sensor to provide a corresponding count having a plurality of count values which indicate a position of a barrier ~~movable barrier movement sensor~~;
- at least one [[a]] passpoint signal generator which effects ~~that is responsive to movement of the movable barrier and that generates a~~ at least one passpoint event from~~, the passpoint event being~~ at least one [[a]] fixed reference point between an open and closed position of the barrier and defines a location of at least one count zone defined by count values which are intermediate the full range of movement of the barrier and which count values are both upstream and downstream of the fixed reference point ~~not being a count of the counter~~;
- a movable barrier position determiner that is responsive to the counter and the passpoint signal generator and which correlates the count of the counter with the passpoint event as the counter counts signals which reflect movement and the position of the barrier through the count zone, a count value being recalibrated from a passpoint event between the open and closed position of the barrier when an anticipated passpoint event between the open and closed position of the barrier does not correlate with a count value in the count zone as the barrier moves past the passpoint reference point between the open and closed position of the barrier such that a position of the barrier is indicated relative to a reference point that is intermediate the full range of travel of the barrier ~~and further comprising a self healing mode of operation that facilitates proper passpoint usage even when an installation sequence for the movable barrier operator has not been properly followed~~.

2. (Original) The movable barrier operator of claim 1 wherein the movable barrier movement sensor comprises a rotational sensor.

3. (Original) The movable barrier operator of claim 1 wherein the movable barrier movement sensor comprises a linear sensor.

4. (Cancel)

5. (Currently Amended) The movable barrier operator of claim 1 [[4]] wherein the ~~wherein the self-healing mode of operation further comprises defining~~ the count zone ~~as comprising~~ includes a ~~predetermined~~ number of ~~the movable barrier~~ count values ~~movement sensor signals~~ in the count zone.

6. (Cancel)

7. (Currently Amended) The movable barrier operator of claim [[4]] 5 wherein the ~~self-healing mode of operation~~ barrier operator further comprises an additional passpoint signal generator at a second fixed reference point between the open and closed position of the barrier and which passpoint signal generator effects a second passpoint event intermediate the full range of movement of the barrier between the open and closed position of the barrier from the second fixed reference point which second passpoint generator defines a location of ~~at least being enabled to define~~ at least one additional count zone of count values between the open and closed position of the barrier ~~movable barrier movement sensor signals~~.

8. (Currently Amended) A method comprising:

- initiating movement of an object between an open end point and a closed end point towards a position;
- processing a count as a function, at least in part, of the movement of the object towards the position;
- detecting a first passpoint event between the open end point and the closed end point, the first passpoint event being at a fixed reference point between the open end point and the closed end point, the passpoint event defining a location of a count zone defined by count values which indicate a position of the object and which count values are intermediate the full

range of travel of the object and which count zone is both upstream and downstream the fixed reference point ~~and not being the count~~;

- correlating a first value of the count with the first passpoint event which is intermediate the full range of travel of the object; and

- recalibrating count values when an anticipated passpoint event does not correlate with a count value in the count zone as the object moves past the fixed reference point in the count zone such that the position of the object is indicated relative to a reference point which is intermediate the full range of travel of the object

~~- defining a first count zone to include:~~

~~- a portion, but not all, of the count as corresponds to movement of the object towards the position; and~~

~~- the first passpoint event~~.

9. (Currently Amended) The method of claim 8 wherein the first passpoint event is one of multiple passpoint events which define the locations of count zones through which the object passes.

10. (Original) The method of claim 8 wherein initiating movement of an object comprises initiating movement of a movable barrier.

11. (Original) The method of claim 10 wherein initiating movement of an object towards a position comprises initiating movement of the movable barrier towards one of:

- an open position; and
- a closed position.

12. (Original) The method of claim 8 wherein processing a count comprises processing a count of revolutions that correspond to movement of the object.

13. (Original) The method of claim 8 wherein processing a count comprises at least one of:

- incrementing a count; and

- decrementing a count.

14. (Original) The method of claim 8 wherein correlating a first value of the count with the first passpoint event comprises correlating a value of the count that is substantially coincident in time to detection of the passpoint event with the first passpoint event.

15. (Currently Amended) The method of claim 8 wherein defining a location of a first count zone further comprises defining the first count zone to not include another passpoint event.

16. (Currently Amended) The method of claim 15 wherein defining a location of a first count zone further comprises ~~defining~~ locating the first count zone to extend no further than halfway to a next adjacent passpoint event.

17. (Currently Amended) The method of claim 8 and further comprising:
- detecting a subsequent passpoint event;
- correlating a subsequent value of the count with the subsequent passpoint event;
- defining a location subsequent count zone to include:
    - a portion, but not all, of the count as corresponds to movement of the object towards the position; and
    - the subsequent passpoint event.

18. (Currently Amended) The method of claim 17 wherein defining a location of a subsequent count zone further comprises ~~defining~~ locating the subsequent count zone to not include the first passpoint event.

19. (Currently Amended) The method of claim 18 wherein defining a subsequent count zone further comprises defining the location of the subsequent count zone to not overlap with the first count zone.

20. (Currently Amended) The method of claim 8 and further comprising:

- detecting a first subsequent passpoint event;

- detecting a last passpoint event that is subsequent to the first subsequent passpoint event;

- ~~defining~~ locating a last count zone to include:

  - a portion, but not all, of the count as corresponds to movement of the object towards the position; and

  - the last passpoint event.

21. (Currently Amended) The method of claim 20 and further comprising ~~defining~~ locating an intervening count zone to include:

  - a portion, but not all, of the count as corresponds to movement of the object towards the position; and

  - the first subsequent passpoint event.

22. (Original) The method of claim 21 wherein no portion of the first count zone, the last count zone, and the intervening count zone overlap with one another.

23. (Currently Amended) A method comprising:

- initiating movement of an object which moves upstream and downstream towards a position;

- processing a count as a function, at least in part, of the movement of the object towards the position;

- detecting a first passpoint event, the first passpoint event being at a first fixed reference point, the first passpoint event defining a location of a first count zone having a plurality of count values both upstream and downstream the first fixed reference point and which count values indicate a position of the object ~~and not being the count~~;

- correlating a first value of the count with the first passpoint event as the object moves past the first fixed reference point;

- detecting a first subsequent passpoint event, the first subsequent passpoint event being at a second fixed reference point and defining a location of a second count zone having a plurality of count values both upstream and downstream the second fixed reference point and which count values indicate a position of the object ~~and not being the count~~;

- correlating a first subsequent count value with the first subsequent passpoint event as the object moves past the second fixed reference point;

- detecting a last passpoint event that is subsequent to the first subsequent passpoint event, the last passpoint event being at a third fixed reference point and defining a location of a last count zone having a plurality of count values both upstream and downstream the last fixed reference point and which count values indicate a position of the object ~~and not being the count~~;

- correlating a last value count value with the last passpoint event as the object moves past the last fixed reference; and

recalibrating a signal count value when an anticipated passpoint event does not correlate with a count value in any of the count zones as the object moves past any one of the fixed reference points such that the position of the object is indicated relative to a reference point that is intermediate the full range of travel of the barrier.

~~- defining a last count zone to include:~~

~~- a portion, but not all, of the count as corresponds to movement of the object towards the position; and~~

~~- the last passpoint event~~.

24. (Currently Amended) The method of claim 23 [[8]] and further comprising:

- ~~subsequently calibrating~~ recalibrating a signal count value and a determined position for the object with respect to a passpoint event that occurs during at least one of the first count zone and the last count zone ~~the first count zone~~.

25. (Previously presented) The method of claim 24 wherein subsequently calibrating a determined position further comprises not calibrating a determined position for the object with respect to a passpoint event that does not occur during the first count zone.

26. (Currently Amended) The method of claim 24 and further comprising taking a first predetermined action when a passpoint event does not occur during one of the count zones ~~the first count zone~~.

27. (Original) The method of claim 26 wherein taking a first predetermined action includes automatically initiating a learning mode of operation.

28. – 30 (Cancel)

31. (Currently Amended) A method for use with a movable barrier operator which moves a movable barrier in an upstream and downstream direction between an open and closed position of the barrier, the method comprising:

during a learning mode of operation:

- initiating movement of the [[a]] movable barrier towards the open or closed ~~a predetermined~~ position;

- maintaining a count of a plurality of count values which indicate the movement and the position of the movable barrier ~~that corresponds to the movement of the movable barrier towards the predetermined position~~;

- detecting a first passpoint event that is at a fixed reference point ~~and not the count~~ and corresponds to ~~movement~~ a location of the movable barrier;

- correlating a first value of the count in at least a first count zone with the first passpoint event;

- ~~defining~~ locating the at least [[a]] first count zone which is intermediate to the open and closed position and full range of travel of the barrier and which first count zone includes ~~to include~~:

- a portion, but not all, of the count as corresponds to movement and position of the barrier ~~object~~ towards a [[the]] position through the count zone past the first passpoint event; ~~and~~

~~- the first passpoint event;~~

during a first mode of operation:

- maintaining a current count of count values that corresponds to movement and position of the movable barrier;

- detecting the first count zone; and

- recalibrating a count value when an anticipated passpoint event does not correlate with a count value in the at least one of the count zones as the barrier moves past the passpoint in the count zone to calibrate a position of the movable barrier

~~- using a passpoint event as occurs during the first count zone to facilitate calibration of position determination for the movable barrier~~.

32. (Original) The method of claim 31 wherein maintaining a count comprises first initializing the count.

33. (Currently Amended) The method of claim 31 wherein defining a first count zone further comprises ~~defining~~ locating the first count zone to not include another passpoint event.

34. (Original) The method of claim 31 wherein the first mode of operation comprises a normal mode of operation.

35. (Currently Amended) The method of claim 31 wherein ~~using a passpoint event as occurs during the first count zone to facilitate calibration of position determination for~~ the recalibration of a count value ~~movable barrier~~ comprises modifying the current count.

36. (Currently Amended) The method of claim 31 wherein ~~using a passpoint event as~~ recalibration occurs during the first count zone to facilitate calibration of position determination for the movable barrier and the recalibration comprises modifying the first value of the count that is correlated with the first passpoint event.

37. (Currently Amended) The method of claim ~~31 wherein using a passpoint event as~~ 36 wherein the recalibration occurs during the first count zone to facilitate calibration of a position determination for the movable barrier comprises and the recalibration includes modifying a physical location of the movable barrier as corresponds to the first passpoint event.

38. (Currently Amended) The method of claim 31 and further comprising:

during the learning mode of operation:

- detecting at least one additional passpoint event that corresponds to movement of the movable barrier;
- correlating a value of the count in an additional count zone associated with at least one additional passpoint event;
- ~~defining another~~ locating additional count zone to include:
  - a portion, but not all, of the count as corresponds to movement of the object towards the position; and
  - the additional passpoint event.

39. (Currently Amended) The method of claim 38 wherein defining additional ~~another~~ count zone further comprises ~~defining~~ locating the additional ~~another~~ count zone to not include another passpoint event.

40. (Currently Amended) The method of claim 38 and further comprising:

during the first mode of operation:

- detecting the additional ~~another~~ count zone;
- using a passpoint event as occurs during the additional ~~another~~ count zone to facilitate calibration of a position determination for the movable barrier.

41. (Currently Amended) A movable barrier controller comprising:

- a movable barrier movement sensor input;
- a counter that is responsive to indicia of movable barrier movement as received via the movable barrier movement sensor input;
- a plurality of passpoint signal generators ~~generator~~ that are [[is]] responsive to indicia of movement of the movable barrier which effect passpoint events from fixed reference points and define locations of count zones between an open and closed position of a movable barrier, the count zones being defined by count values which are intermediate the full range of movement of the barrier, the count zones having count values which indicate a position of a movable barrier and which count values correspond to a position of the movable barrier

intermediate its full range of movement, the count zones having count values both upstream and downstream the fixed reference point; and

- a position ~~determination means~~ determiner which is responsive to the counter and the passpoint signal generators and ~~generator~~ which determiner processes ~~for automatically processing~~ position information of the ~~as corresponds to a~~ movable barrier as a function of a passpoint event that occurs in the count ~~during a predetermined~~ zone as the barrier moves through a count zone such that a position of the barrier is indicated relative to a reference point that is intermediate the full range of travel of the barrier ~~of count values, the passpoint event being a fixed reference and not being a count of the counter~~.

42. (Currently Amended) The movable barrier controller of claim 41 wherein the ~~predetermined~~ count zones include ~~zone of count values comprises a zone that includes~~ a plurality of consecutive count events.

43. (Currently Amended) The movable barrier controller of claim 41 wherein ~~the predetermined zone of count values comprises~~ a count zone ~~that~~ includes only a single passpoint event.

44. (Currently Amended) The movable barrier controller of claim 41 wherein the passpoint signal generators generate ~~generator generates~~ a plurality of passpoint events during movement of the movable barrier ~~and wherein the predetermined zone of count values comprises a zone having a range that can only possibly contain a single one of the passpoint events~~.